

Work Order ID 162980***162980***

Page 1

Monday, June 19, 2017 4:21:02 PM

Item ID: D5355-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Aft Clamp Assembly

Start Date: 7/10/2017 Start Qty: 4.00 ***4***

Cust Item ID:

Required Date: 7/12/2017 Req'd Qty: 4.00 ***4***

Customer:

Reference:

Approvals:

Process Plan:

Date JUN 19 2017

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D5355

C

100

0.00

100

BAND SAW

Bandsaw

Memo

0.04

Jeaspa Bandsaw

Cut Blanks at 6.200"

Dr 17-06-21

4

φ

DAS
08
9-09

110

3.20

110

HAAS CNC VERTICAL MACHINING #1

HAAS 5AXIS

Memo

1.46

HAAS CNC vertical machine #5

1-Machine per folio FB434
DWG REV: S
FOLIO REV: AA

Dr 17-06-21

4

φ

DAS
08
9-09

2- deburr and break all sharp edge as per dwg

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
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LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

Work Order ID 162980

Monday, June 19, 2017 4:21:02 PM

162980

Page 2

Item ID: D5355-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Aft Clamp Assembly
Start Date: 7/10/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 7/12/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.04							

Quality Control

130	QC8- Inspect parts - second check	0.00							
130									
QC	Memo	0.08							

Quality Control

140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140									
Outsource4	Memo	288.00							

Outsource process - Anodize

Issue P/O to ATG :

36924

Black Anodize as per Dwg D5355

Certification of Conformity is required.

B. 17-06-21**4****0****DAS
08
9-89****4****0****DAS
14
9-89****17/07/05****4****JUL 05 2017****DAS
13
9-89**

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.08							
Packaging	Certification of Conformity is required.								
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.08							
Quality Control									

4x SPI 7-7-10

4

DAS
38
9-89

JUL 10 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			OTHER : _____																	

Work Order ID 162980

Monday, June 19, 2017 4:21:02 PM

162980

Page 4

Item ID: D5355-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Aft Clamp Assembly

Stop

NS2

Start Date: 7/10/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 7/12/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160						4	0		
Small Fab	Memo	2.45						JUL 14 2017	DAS 19 9-89
Small Fab	-Assemble as per dwg.								
	-Secure nuts as per dwg. (Note #8)								
	-Apply proseal as per dwg. (Note #9)								
	Batch: 136953								
	Exp. date: 10/17								
170									
170						4			
QC	Memo	0.08							
Quality Control									DAS 38 9-89 JUL 14 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 162980

Monday, June 19, 2017 4:21:02 PM

162980

Page 5

Item ID: D5355-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Aft Clamp Assembly

Stop ***NS2***

Start Date: 7/10/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 7/12/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
Qty **DAS**Reject
QtyReject
NumberInsp.
Stamp

180

Identify as per dwg & Stock Location: **5/5/16**

0.00

180

Packaging

Memo

0.04

Packaging

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.40

Quality Control

DAS
21
9-89

JUL 17 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

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162980

D5355-041

Required Date: 7/12/2017

Required Qty: 4.00

Comments: IPP REV:A 16.01.05 NEW ISSUE DD VERF:JLM IPP
REV:B 16.01.26 REV.A DWG DD VERF:JLM IPP REV:C
16/07/12 Per rev.B dwg. JFS Verified by: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D5316-1		Manufactured	No			160	Each	0.0000	1	4			
D5316-1 T-Bolt Strap													
D5351-1		Manufactured	No			160	Each	36.0000	2	8			
D5351-1 T-Bolt Spacer													
				<u>Location</u>			<u>Loc Qty</u>						
				ST165			36						
				160624			36						
M6061T6B1.250X04.50 0		Purchased	No			100	f	13.8984	0.517	2.176842			
M6061T6B1 250X04 500 6061-T6 Bar 1.25 X 4.50													

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT004	13.8984	
→ m134776	1.8984	
→ m137341	12	

$$\begin{array}{r} 1.4505 \\ 0.5105 \end{array}$$

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Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Picklist Print

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Page 2

Work Order ID: 162980

162980

Parent Item: D5355-041

D5355-041

Parent Item Name: Aft Clamp Assembly

Start Date: 7/10/2017

Required Date: 7/12/2017

Start Qty: 4.00

Required Qty: 4.00

MS21043-3

Purchased

No

160

Each

668.0000

2

8

MS21043-3

Nut

**

17-7-14 MLL

Location

Loc Qty

Loc Code

FG	80
103691	80
FP001	119
m136182	119
GA	88
m136182	88
OVER007	300
m137587	300
ST302	81
m137459	81

NAS1149D0332J

Purchased

No

160

Each

1,071.000

2

8

NAS1149D0332.I

Washer

**

17-7-14 MLL

Location

Loc Qty

Loc Code

FP	213
m136015	8
m137075	205
GA	272
m136643	272
ST264	586
m136015	0
m137412	26
m137736	560

DQA: _____ Date: _____

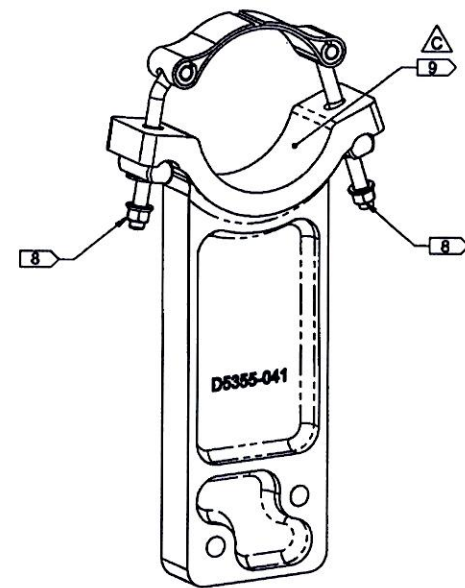
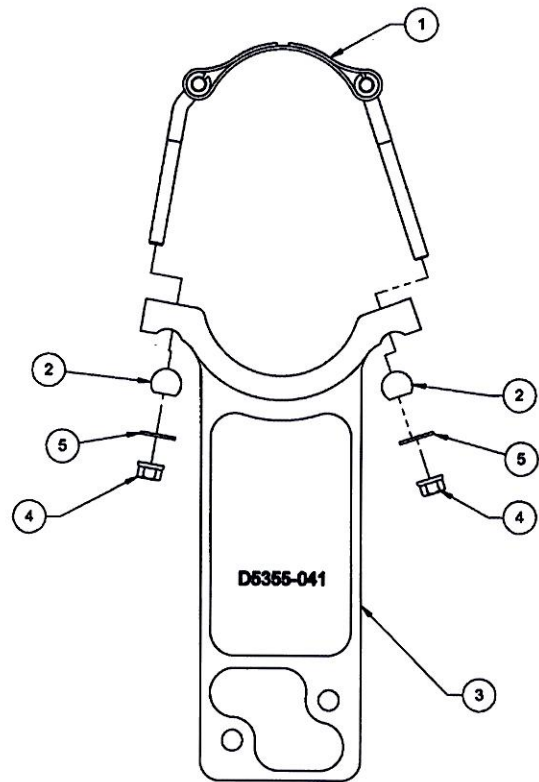
WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



ITEM	QTY	P/N	DESCRIPTION
	X	D5355-041	R66 AFT CLAMP ASSY
1	1	D5316-1	T-BOLT STRAP
2	2	D5351-1	T-BOLT SPACER
3	1	D5355-1	SUPPORT
4	2	MS21043-3	NUT, SELF-LOCKING
5	2	NAS1149D0332J	WASHER
6	A/R	PROSEAL 890	SEALANT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 162980AD
JUN 20 2017

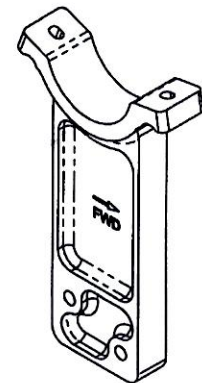
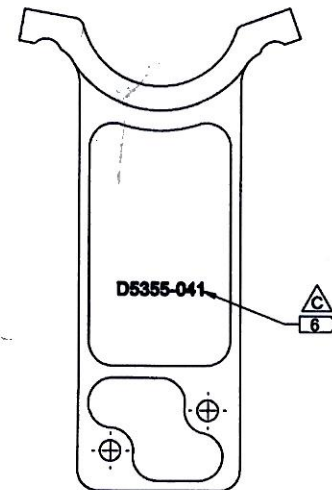
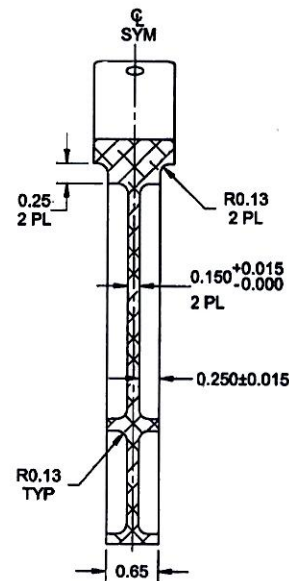
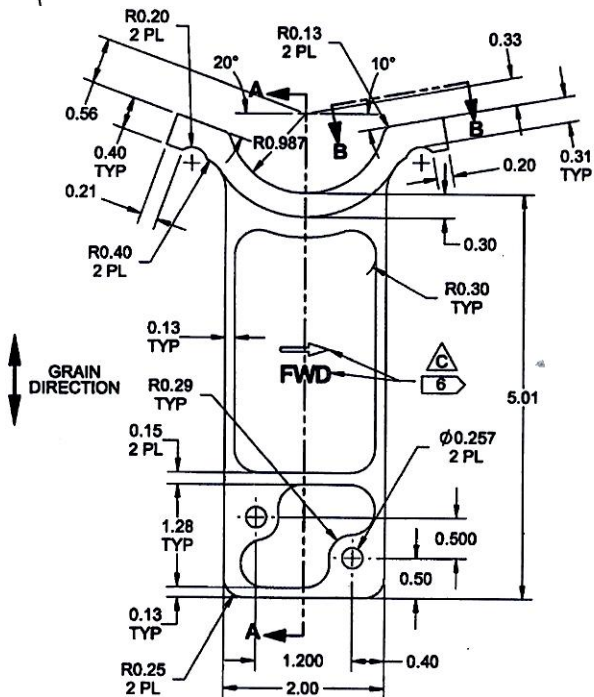
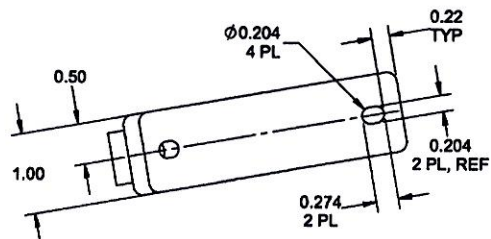
D5355-041 R66 AFT CLAMP ASSY ⚠

- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: AS SHOWN ON D5355-1
 - 7) WEIGHT: 0.51 lbs
 - 8) SECURE NUTS WITH 1-2 THREAD AS SHOWN
 - 9) APPLY AN EVEN LAYER OF PROSEAL 890 (0.02"- 0.03" THICK) ON INSIDE SURFACE

RELEASED
R 2017-03-22
ECW 11-535 DM

C	ADDED ENGRAVING, REVISE NOTE 8 AND LOCATION OF PROSEAL (ZN A8-1, C3-1 A8-2, B3-2, B6-2)	RF	17.02.09
B	REDESIGN -1/-041 (ZN B5-1, B5-2); ADD NOTE 9 (ZN A8-1); REMOVE -043	RF	18.05.24
A	NEW ISSUE	RF	15.08.10
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JFS	D5355	SHEET 1 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	R66 AFT CLAMP ASSY	NTS
DATE	17.02.09	COPYRIGHT © 2018 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

APPROVED



NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH ASSEMBLY P/N, FWD & ARROW PER DART QSI 044 6.3 (CNC ENGRAVING)
USING MAX DEPTH OF 0.010 WITH MIN RADIUS OF 0.010
- 7) WEIGHT: 0.43 lbs
- 8) UNDEFINED FEATURES CONTROLLED BY CAD FILE D5355-1 Rev. C.SLDPR

D5355-1 SUPPORT

RELEASED
2017-03-22

APPROVED

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JFS	D5355	SHEET 2 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	R66 AFT CLAMP ASSY	NTS
DATE	17.02.09	COPYRIGHT © 2018 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DART AEROSPACE LTD		Work Order: 162980
Description: SUPPORT		Part Number: D5355-1
Inspection Dwg: D5355 Rev: C		Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/- .030	1.001	✓		Vern	GA-13
0.50	+/- .030	0.504	✓		"	"
φ0.204	+ .005 / - .001	φ0.205	✓		"	"
0.22	+/- .030	0.222	✓		"	"
0.204	+/- .010	0.205	✓		"	"
0.274	+/- .010	0.273	✓		"	"
0.31	+/- .030	0.319	✓		"	"
0.20	+/- .030	0.200	✓		"	"
0.33	+/- .030	0.331	✓		H-6	31006
10°	+/- 1/2°	10°	✓		Angle M.	CNC-17
R0.13	+/- .030	R0.125	✓		R-6	ref.
20°	+/- 1/2°	20°	✓		Angle M.	CNC-17
R0.20	+/- .030	R0.200	✓		R-6	ref.
0.56	+/- .030	0.564	✓		H-6	31006
0.40	+/- .030	0.400	✓		Vern	GA-13
0.21	+/- .030	0.211	✓		"	"
R0.40	+/- .030	R0.391	✓		R-6	ref.
0.13	+/- .030	0.125	✓		Mic	GA-03
R0.29	+/- .030	R0.282	✓		R-6	ref.
0.15	+/- .030	0.150	✓		Mic	GA-03
1.28	+/- .030	1.275	✓		Vern	GA-13
0.13	+/- .030	0.125	✓		Mic	GA-03
R0.25	+/- .030	R0.250	✓		R-6	ref.
1.200	+/- .005	1.200	✓		H-6	31006
2.00	+/- .030	2.000	✓		Vern	GA-13
0.40	+/- .030	0.401	✓		"	"
0.50	+/- .030	0.502	✓		H-6	31006
0.500	+/- .005	0.501	✓		"	"
φ0.257	+ .006 / - .001	φ0.259	✓		Vern	GA-13
5.01	+/- .030	5.014	✓		H-6	31006
R0.30	+/- .030	R0.297	✓		R-6	ref.
0.30	+/- .030	0.300	✓		Vern	GA-13

Measured by: A.A. DAS	Checked by: 14 9-89	QC Inspector:
Date: 17-06-21 9-89	Date: 17/07/05	Date:

Engineering Approval: (If necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO36924

Purchase Order Date 7/5/2017

PO Print Date 7/7/2017

Page Number 1 of 2

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	163123	D5354-041 CLAMP REV. C	7/7/2017 Yes 7/7/2017 FINISH: ANODIZE BLACK PER MIL-8625F TYPE I/IB/IC/II/IIB CLASS 2		3.00	\$12.50	\$37.50
Line Total:							\$37.50
2	163124	D5354-042 CLAMP REV. C	7/7/2017 Yes 7/7/2017 FINISH: ANODIZE BLACK PER MIL-8625F TYPE I/IB/IC/II/IIB CLASS 2		3.00	\$12.50	\$37.50
Line Total:							\$37.50
3	162980	D5355-041 CLAMP REV. C	7/7/2017 Yes 7/7/2017 FINISH: ANODIZE BLACK PER MIL-8625F TYPE I/IB/IC/II/IIB CLASS 2		4.00	\$12.50	\$50.00

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

7/7/2017

DAS
38
9-89

8017-710



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913508

Date: 07-Jul-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
3 ea	Part: D5354-041 Clamp Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils) Job: 21332	Rev: C PO: PO36924	Line: 1
3 ea	Part: D5354-042 Clamp Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils) Job: 21333	Rev: C PO: PO36924	Line: 2
4 ea	Part: D5355-041 ✓ Clamp Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils) Job: 21334	Rev: C PO: PO36924	Line: 3
1 ea	Part: ADMINISTRATION FEE Administrative Fee Job: 21335	Rev: N/A PO: PO36924	Line: 4-5
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>07/07/2017</u> Certified Signature: <u>[Signature]</u> Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. Made in Canada.			

DAS
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SP17-7-10